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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/593,068

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EXAMINER

GUARINO, RAHEL

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,068	Applicant(s) NISHIMURA ET AL.	
	Examiner Rahel Guarino	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the **range of 50 to 150 words**. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because **it is over 150 words**.

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 2 is rejected under 35 USC 112/2d as being indefinite due to reference **"MOST standard"**.

When a claim makes reference to an industry standard, such as “**MOST standard**”, it may be rejected under 112/2d as being indefinite, as rules change over time. Therefore, it is inappropriate to have the scope of a claim change with time. Since the organizations implementing standards meet regularly and have the authority to modify standards, any connection a claim may have to these standards may have varying scope over time. The other aspect arising from this is enablement. If the regulation or standard changes, the disclosure may no longer support the limitation. An argument posed by applicant might be, “the standard being applied is that which is in effect as the day of filing of the application.” If the original specification supports this, i.e. provides a dated regulation or standard, then most likely this is not an 112/2d rejection. If it is essential material, applicant may be required to bodily incorporate this material. Likewise if the standard is so common that its meaning is definite, such as RS-235 interface, a 112/2d rejection would not be appropriate.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1,5,7,9,11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu et al. EP 1 278 318 A2 in view of Nakatsu et al. US 5,402,272

Re claim 1, Wu discloses a network system (fig.1) having a plurality of interface devices (10, 50) mutually connected via a communication path (45, para#20 lines 40-44), for carrying out data transmission between node devices connected to the respective interface devices via the interface devices and the communication path, in which at least some of the node devices output transmission data (30 and 65) wherein the interface device (25,35), does not teach data in a form of a bi-phase modulated digital signal into a transmission signal subjected to amplitude shift modulation, and a transmission conversion section for converting the transmission into a transmission signal subjected to amplitude shift modulation, and outputting to the communication path and outputting to the communication path.

However, Nakatsu teaches a bi-phase modulated digital signal into a transmission signal subjected to amplitude shift modulation (col. 4 lines 38-41), and a transmission conversion section for converting the transmission data into a transmission signal subjected to amplitude shift modulation (col. 4 lines 1-6), and outputting to the communication path and outputting to the communication path (col. 4 lines 11-16).

Therefore, taking the combined teaching of Wu and Nakatsu as a whole would have been rendered obvious to one skilled in the art to modify Wu to w in a form of a bi-phase modulated digital signal into a transmission signal subjected to amplitude shift modulation, and a transmission conversion section for converting the transmission into a transmission signal subjected to amplitude shift modulation, and outputting to the communication path and outputting to the communication path

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for the benefit of recovering the carrier from reproduced signal (col. 3 lines 4-9).

Re claim 5, the modified invention as claimed in claim 1, wherein the interface device comprises a reception conversion section (50) for receiving the transmission signal to be transmitted to the node device connected to the interface device (para#28), from the communication path (45), converting into reception data which is a modulated digital signal, and forwarding to the node device (para#29).

Re claim 7, the modified invention as claimed in claim 1, wherein the node device comprises a reception conversion section for converting the transmission signal received into reception which is a bi-phase modulated digital signal (col. 4 lines 38-41, Nakatsu).

Re claim 9, Wu discloses an interface device (fig.1) for use in a data communication network in which a plurality of interface nodes (15,25,35, 60,70,80) are connected to one another via a communication path intervening, in each node, (45, para#20 lines 40-44), between a node device for transmission (10) and reception (50) of data and the communication path (45), does not teach data in a form of a bi-phase modulated digital signal into a transmission signal subjected to amplitude shift modulation, and a transmission conversion section for converting the transmission into a transmission signal subjected to amplitude shift modulation, and outputting to the communication path and outputting to the communication path.

However, Nakatsu teaches a bi-phase modulated digital signal into a transmission signal subjected to amplitude shift modulation (col. 4 lines 38-41), and a transmission conversion section for converting the transmission data into a transmission

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signal subjected to amplitude shift modulation (col. 4 lines 1-6), and outputting to the communication path and outputting to the communication path (col. 4 lines 11-16).

Therefore, taking the combined teaching of Wu and Nakatsu as a whole would have been rendered obvious to one skilled in the art to modify Wu to w in a form of a bi-phase modulated digital signal into a transmission signal subjected to amplitude shift modulation, and a transmission conversion section for converting the transmission into a transmission signal subjected to amplitude shift modulation, and outputting to the communication path and outputting to the communication path for the benefit of recovering the carrier from reproduced signal (col. 3 lines 4-9).

Re claim 11, the modified invention as claimed in claim 9, further comprising a reception conversion section for receiving the transmission signal to be transmitted to the node device connected to the interface device (col. 4 lines 11-16), from the communication path converting into reception data which is a bi-phase modulated digital signal, and forwarding to the node device (col. 4 lines 38-41, Nakatsu).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2,6,8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umei et al. US 2005/0083863 in view of by Wu et al. EP 1 278 318 A2 in further view of Nakatsu et al. US 5,402,272

Re claim 2, Umei discloses a vehicle-mounted network system based on a MOST standard (fig.1), having a plurality of interface devices mutually connected so as to together form a ring-like connection via a communication path (2,para#4), for carrying out data transmission between node devices connected to the respective interface devices (20a) via the interface devices and the communication path (2), does not teach wherein the interface device has a transmission conversion section for converting the transmission data from the node device connected to the interface device, into a transmission signal subjected to amplitude shift modulation, and outputting to the communication path.

However, Wu wherein the interface device (25,35) has a transmission conversion section (35) for converting the transmission data from the node device connected to the interface device (25), into a transmission signal subjected to amplitude shift modulation, and outputting to the communication path (para#27); does not teach transmission data in a form of a bi-phase modulated digital signal.

However, Nakatsu teaches a bi-phase modulated digital signal into a transmission signal subjected to amplitude shift modulation (col. 4 lines 38-41).

Therefore, taking the combined teaching of Wu and Umei as a whole

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would have been rendered obvious to one skilled in the art to modify Umei to wherein the interface device has a transmission conversion section for converting the transmission data from the node device connected to the interface device, into a transmission signal subjected to amplitude shift modulation, and outputting to the communication path for the benefit of compensating for the insufficient transitions between the voltage levels (para#14).

Therefore, taking the combined teaching of Umei, Wu and Nakatsu as a whole would have been rendered obvious to one skilled in the art to modify Wu and Umei to w in a form of a bi-phase modulated digital signal into a transmission signal subjected to amplitude shift modulation for the benefit of recovering the carrier from reproduced signal (col. 3 lines 4-9).

Re claim 6, the modified invention as claimed in claim 2, wherein the interface device comprises a reception conversion section for receiving the transmission signal to be transmitted to the node device connected to the interface device, from the communication path, converting into reception data which is a bi-phase modulated digital signal, and forwarding to the node device (col. 4 lines 38-41, Nakatsu).

Re claim 8, the modified invention as claimed in claim 2, wherein the node device comprises a reception conversion for converting the transmission signal received into reception data which is a bi-phase modulated digital signal (col. 4 lines 38-41, Nakatsu).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3,10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu et al. EP 1 278 318 A2 in view of Laurenti et al. US 6,760,837

Re claim 3, the network system according to claim 1, wherein the transmission conversion section comprises: a modulation method (15,para#11) conversion circuit for converting the transmission data into an intermediate signal which is an modulated digital signal (para#15); and an amplitude modulation circuit for modulating an amplitude of a predetermined carrier wave according to voltage variation (fig.6 shows the voltage level variation (0 and 1)) representing a bit sequence of the intermediate signal, to thereby generate the transmission signal (para#25); does not explicitly teach a bit sequence of the intermediate signal.

However, Laurenti discloses teach a bit sequence of the intermediate signal (col. 2 lines 35-37).

Therefore, taking the combined teaching of Wu and Laurenti as a whole would have been rendered obvious to one skilled in the art to modify Wu to utilize

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a bit sequence of the intermediate signal for the benefit of providing the optimal configured of the intermediate signal, this reducing the processing elements (col. 3 lines 9-15, Laurenti).

Re claim 10, the interface device according to claim 9, wherein the transmission conversion section comprises: a modulation method (15,para#11) conversion circuit for converting the transmission data into an intermediate signal which is an modulated digital signal(para#15); and an amplitude modulation circuit for modulating an amplitude of a predetermined carrier wave according to voltage variation (fig.6 shows the voltage level variation (0 and 1)) representing a bit sequence of the intermediate signal, to thereby generate the transmission signal (para#25); does not explicitly teach a bit sequence of the intermediate signal.

However, Laurenti discloses teach a bit sequence of the intermediate signal (col. 2 lines 35-37).

Therefore, taking the combined teaching of Wu and Laurenti as a whole would have been rendered obvious to one skilled in the art to modify Wu to utilize a bit sequence of the intermediate signal for the benefit of providing the optimal configured of the intermediate signal, this reducing the processing elements (col. 3 lines 9-15, Laurenti).

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Umei et al. US 2005/0083863 in view of by Wu et al. EP 1 278 318 A2 in further view of Laurenti et al. US 6,760,837

Re claim 4, the modified invention as claimed in claim 2 wherein the transmission conversion section comprises: a modulation method (15,para#11) conversion circuit for converting the transmission data into an intermediate signal which is an modulated digital signal(para#15); and an amplitude modulation circuit for modulating an amplitude of a predetermined carrier wave according to voltage variation (fig.6 shows the voltage level variation (0 and 1)) representing a bit sequence of the intermediate signal, to thereby generate the transmission signal (para#25); does not explicitly teach a bit sequence of the intermediate signal.

However, Laurenti discloses teach a bit sequence of the intermediate signal (col. 2 lines 35-37).

Therefore, taking the combined teaching of Umei, Wu and Laurenti as a whole would have been rendered obvious to one skilled in the art to modify Wu and Umei to utilize a bit sequence of the intermediate signal for the benefit of providing the optimal configured of the intermediate signal, this reducing the processing elements (col. 3 lines 9-15, Laurenti).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rahel Guarino whose telephone number is (571)270-1198. The examiner can normally be reached on M-F (7:30-4:00).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Payne David can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rahel Guarino/
Examiner, Art Unit 2611

**/David C. Payne/
Supervisory Patent Examiner, Art Unit 2611**